6560-50

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2011-0080; FRL-9622-7]

Approval and Promulgation of Air Quality Implementation Plans; Indiana; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing a limited approval of revisions to the Indiana State Implementation Plan (SIP) addressing regional haze for the first implementation period. Indiana submitted its regional haze plan on January 14, 2011, and supplemented it on March 10, 2011. The Indiana regional haze plan addresses the requirements of the Clean Air Act (CAA or Act) and Regional Haze Rule (RHR) requirements for states to remedy any existing and prevent future anthropogenic impairment of visibility in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the "regional haze program"). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. EPA is proposing a limited approval of these SIP revisions to implement the regional haze requirements for Indiana on the basis that the revisions, as a whole, strengthen the Indiana SIP. In a separate action, EPA has previously proposed a

limited disapproval of the Indiana regional haze SIP because of the deficiencies in Indiana's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). Consequently, we are not proposing to take action in this notice to address the stat's reliance on CAIR to meet certain regional haze requirements.

DATES: Comments must be received on or before **[insert date 30 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2011-0080, by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: blakley.pamela@epa.gov.
3. Fax: (312)692-2450.
4. Mail: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.
5. Hand Delivery: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special

arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R05-OAR-2011-0080. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or

CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I of the SUPPLEMENTARY INFORMATION section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone Charles Hatten, Environmental Engineer, at (312) 886-6031 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Charles Hatten, Environmental Engineer, Control Strategy Section, Air Programs Branch

(AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6031, hatten.charles@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

I. What Should I Consider as I Prepare My Comments for EPA?

When submitting comments, remember to:

1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).

2. Follow directions - EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

4. Describe any assumptions and provide any technical information and/or data that you used.

5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

6. Provide specific examples to illustrate your concerns, and suggest alternatives.

7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

8. Make sure to submit your comments by the comment period deadline identified.

II. What is the Background for EPA's Proposed Action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities that are located across a broad geographic area and emit fine particles ($PM_{2.5}$) (e.g., sulfates, nitrates, organic particles, elemental carbon, and soil dust) and its precursors - sulfur dioxide (SO_2), nitrogen oxides (NO_x), and in some cases ammonia (NH_3) and volatile organic compound (VOCs). Fine particle precursors react in the atmosphere to form fine particulate matter. Aerosol $PM_{2.5}$ impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity and distance one can see. $PM_{2.5}$ can also cause serious health effects and mortality

in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range, the distance at which an object is barely discernable, in many Class I areas[1] in the western United States is 100-150 kilometers. That is about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In the eastern and Midwestern Class I areas of the United States, the average visual range is generally less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. See 64 FR 35715 (July 1, 1999).

B. Requirements of the CAA and EPA's RHR

1Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to ''mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a ''Federal Land Manager.'' 42 U.S.C. 7602(i). When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I areas which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources known as, "reasonably attributable visibility impairment" (RAVI). See 45 FR 80084. These regulations, codified at 40 CFR part 50, subpart P, represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze, the RHR, on July 1, 1999 (64 FR 35713). The RHR, which amends 40 CFR part 50, subpart P, revised the existing visibility regulations to integrate provisions addressing regional haze impairment and established a comprehensive

visibility protection program for Class I areas. The subpart P requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section III. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia, and the Virgin Islands.[2]

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among states, tribal governments, and various federal agencies. Pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, states need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another state.

EPA has encouraged the states and tribes to address visibility impairment from a regional perspective because the pollutants that lead to regional haze can originate from sources located across broad geographic areas. Five regional planning

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2Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the entire State of New Mexico under the New Mexico Air Quality Control Act (section 74-2-4).

organizations (RPOs) were developed to address regional haze and related issues in their geographical area. The five RPOs are the Mid-Atlantic and Northeastern Visibility Union (MANE-VU) for the Northeastern states, the Visibility Improvement State and Tribal Association of the Southeast (VISTAS), the Midwest Regional Planning Organization (MRPO), the Central Regional Air Planning Association (CENRAP), and Western Regional Air Partnership (WRAP). The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country and then pursued the development of regional strategies to reduce $PM_{2.5}$ emissions and other pollutants leading to regional haze.

The State of Indiana participated in the planning efforts of the MRPO. The MRPO is a collaborative effort of state governments, tribal governments, and various federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility and other air quality issues inside the borders of the five States of Illinois, Indiana, Michigan, Ohio, and Wisconsin. Members of MRPO include the five states, the Federal Land Managers (U.S. National Park Service, U.S. Fish & Wildlife Service, and U.S. Forest Service), and EPA.

III. What Are the Requirements for Regional Haze SIPs?

A. The CAA and the RHR

Regional haze SIPs must assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require states to establish long-term strategies (LTS) for making reasonable progress toward meeting this goal. Plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install best available retrofit technology (BART) for the purpose of reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

B. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview[3] (dv) as the principal metric or unit for expressing visibility impairment. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions.

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3 The preamble to the RHR provides additional details about the deciview. 64 FR 35714, 35725 (July 1, 1999.)

Visibility expressed in deciviews is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm function. The deciview is a more useful measure for tracking progress in improving visibility than light extinction itself because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.

The deciview is used in expressing reasonable progress goals (RPGs), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure "reasonable progress" toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution. The national goal is a return to natural conditions such that anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401-437) and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP is submitted and at the progress review every

five years, midway through each 10-year implementation period. The RHR requires states with Class I areas (Class I states) to determine the degree of impairment in deciview for the average of the 20 percent least impaired (best) and 20 percent most impaired (worst) visibility days over a specified time period at each of its Class I areas. Each state must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to states regarding how to calculate baseline, natural, and current visibility conditions in documents titled, EPA's *Guidance for Estimating Natural Visibility conditions under the Regional Haze Rule*, September 2003, (EPA-454/B-03-005 located at http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf) (hereinafter referred to as "EPA's 2003 Natural Visibility Guidance") and *Guidance for Tracking Progress Under the Regional Haze Rule* (EPA-454/B-03-004 September 2003 located at http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf)) (hereinafter referred to as "EPA's 2003 Tracking Progress Guidance").

For the first regional haze SIP, the "baseline visibility conditions" are the starting points for assessing "current" visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent best days and 20 percent worst days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while comparisons of future conditions against baseline conditions will indicate the amount of progress made. In general, the 2000 to 2004 baseline period is considered the time from which improvement in visibility is measured.

C. Determination of RPGs

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two distinct RPGs, one for the best days and one for the worst days for every Class I area for each approximately 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to

establish goals that provide for "reasonable progress" toward achieving natural visibility conditions. In setting RPGs, states must provide for an improvement in visibility for the worst days over the approximately 10-year period of the SIP and ensure no degradation in visibility for the best days.

States have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in EPA's RHR at 40 CFR 51.308(d)(1)(i)(A): (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. The state must demonstrate in its SIP how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in EPA's *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program,* ("EPA's Reasonable Progress Guidance"), July 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10 (pp.4-2, 5-1). In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 ("uniform rate of

progress" or "glide path") and the emissions reduction needed to achieve that rate of progress over the 10-year period of the SIP. In setting RPGs each state with a Class I areas (Class I state) must also consult with potentially contributing states that may affect visibility impairment at the Class I areas. See 40 CFR 51.308(d)(1)(iv).

D. BART

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain older large stationary sources to address visibility impacts from these sources. Specifically, CAA section 169A(b)(2)(A) requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal including a requirement that certain categories of existing major stationary sources[4] built between 1962 and 1977 procure, install, and operate BART as determined by the state. Under the RHR, the state can require source-specific BART controls, but it also has the flexibility to adopt an alternative such as an emissions trading program or alternate control providing greater progress towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART*

4 The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7).

Determinations Under the Regional Haze Rule at Appendix Y to 40 CFR Part 51 (BART Guidelines) to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. (70 FR 39104) A state must use the approach in the BART Guidelines in making a BART determination for a fossil fuel-fired electric generating unit (EGUs) with total generating capacity in excess of 750 megawatts. States are encouraged, but not required, to follow the BART Guidelines in making BART determinations for other sources.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO_2, NO_x, and PM. EPA has stated that states should use their best judgment in determining whether VOC and NH_3 emissions impair visibility in Class I areas.

Under the BART Guidelines, states may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. The exemption threshold set by the state should not be higher than 0.50 dv.

Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual source's impact.

The state must identify potential BART sources in its SIP, described as "BART-eligible sources" in the RHR, and document its BART control determination analyses. In making BART determinations, section 169A(g)(2) of the CAA requires the state to consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source, and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. The BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the state's regional haze SIP. See CAA section 169(g)(4); 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate

that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source.

The RHR also allows states to implement an alternative program in lieu of BART if desired so long as the alternative program can be demonstrated to achieve greater progress toward the national visibility goal than implementing BART controls. EPA made such a demonstration for CAIR under regulations issued in 2005 revising the regional haze program. 70 FR 39104 (July 6, 2005). EPA's regulations provide that states participating in the CAIR cap-and trade program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or which remain subject to the CAIR Federal Implementation Plan (FIP) in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO_2 and NO_x. 40 CFR 51.308(e)(4). Since CAIR is not applicable to emissions of PM, states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant.

CAIR was later found to be inconsistent with the requirements of the CAA and the rule was remanded to EPA. See *North Carolina v. EPA,* 550 F.3d 1176 (D.C. Cir. 2008). The court left CAIR in place until the Agency replaced it. EPA replaced CAIR with the Transport Rule in August 2011.

On December 30, 2011, EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would be obtained by implementing BART for SO_2 and NO_x for BART-subject EGUs in the area subject to the Transport Rule. 76 FR 82219. Based on that proposed finding, EPA also proposed to revise the RHR to allow states, including Indiana, to meet the requirements of an alternative program in lieu of BART by participation in the trading programs under the Transport Rule. The Transport Rule is not applicable to emissions of PM, so states would still be required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant. EPA has not taken final action on that rule.

E. LTS

Consistent with the requirement in section 169A(b) of the CAA that states include in their regional haze SIP a 10 to 15-year strategy for making reasonable progress, section 51.308(d)(3) of the RHR requires that states include an LTS in their regional haze SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve

the RPGs for all Class I areas within or affected by emissions from the state. 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to address interstate visibility issues sufficiently.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS. The seven factors are: (1) emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for

compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. 40 CFR 51.308(d)(3)(v).

F. **Coordinating Regional Haze and RAVI LTS**

As part of the RHR, EPA revised 40 CFR 51.306(c), regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing regional haze visibility impairment in accordance with 40 CFR 51.308(b) and (c). The state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and regional haze on or before this date. It must also submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTSs, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic review of a state's LTS

must report on both regional haze and RAVI impairment and be submitted to EPA as a SIP revision.

G. Monitoring Strategy and Other Implementation Plan Requirements

40 CFR 51.308(d)(4) includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I areas within the state. The strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305. Compliance with this requirement may be met through participation in the IMPROVE network, meaning that the state reviews and uses monitoring data from the network. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met. The monitoring strategy is due with the first regional haze SIP and it must be reviewed every five years.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas both within and outside the state;

- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible in electronic format;
- A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year with available data, and future projected emissions. A state must also make a commitment to update the inventory periodically; and
- Other elements including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

The RHR requires control strategies to cover an initial implementation period extending to the year 2018 with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of 40 CFR 51.308(d) with the

exception of BART. The requirement to evaluate sources for BART applies only to the first regional haze SIP. Facilities subject to BART must continue to comply with the BART provisions of 40 CFR 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

H. Consultation with States and Federal Land Managers(FLMs)

The RHR requires that states consult with FLMs before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other

programs having the potential to contribute to impairment of visibility in Class I areas.

IV. What is EPA's Analysis of Indiana's Regional Haze Plan?

Indiana submitted its regional haze plan on January 14, 2011, and supplemented it on March 10, 2011.

A. Affected Class I Areas

States are required to address regional haze affecting Class I areas within a state and in Class I areas outside the state that may be affected by that state's emissions. Indiana does not have any Class I areas within its borders, but has been identified as influencing the visibility impairment of Class I areas in other nearby states. Indiana is responsible for developing a regional haze SIP that addresses its visibility impairment on Class I areas it may affect describing its LTS, its role in the consultation processes, and how the SIP meets other elements in EPA's RHR. Since Indiana does not have any Class I areas within its borders, and has no sources that have been identified as causes of RAVI, however, Indiana is not required to address the following Regional Haze SIP elements: (1) Calculation of baseline and natural visibility conditions; (2) establishment of reasonable progress goals; (3) monitoring requirements, and (4) RAVI requirements.

Indiana reviewed technical analyses conducted by MRPO and

other RPOs to determine what Class I areas are affected by Indiana's emissions. MPRO conducted both a back trajectory analysis and modeling to determine the affects of its states' emissions. Indiana also used assessments by MANE-VU, VISTAS, and a joint state assessment by Arkansas and Missouri, each of which identified states having non-de minimus impacts on specified Class I areas. The following are Class I areas identified as being affected by Indiana sources:

Southeastern U.S. (VISTAS) - Sipsey Wilderness Area, Alabama; Mammoth Cave National Park, Kentucky; Great Smoky Mountains National Park, North Carolina and Tennessee; James River Face Wilderness Area, Virginia (VA); Shenandoah National Park, VA; and Dolly Sods / Otter Creek Wilderness Areas, West Virginia (WVA)

Eastern U.S. (MANE-VU) - Acadia National Park, Maine; Moosehorn Wilderness Area, Maine; Great Gulf Wilderness Area, New Hampshire; Brigantine Wilderness Area, New Jersey; and Lye Brook Wilderness Area, Vermont

North Central U.S. (MRPO and CENRAP) - Isle Royale National Park, Michigan (MI); Seney National Wildlife Refuge, MI; Boundary Waters Canoe Area Wilderness Area, Minnesota (MN); and Voyageurs National Park, MN

South Central U.S. (CENRAP) - Hercules-Glades Wilderness

Area, Missouri (MO); Mingo Wilderness Area, MO; Caney Creek Wilderness Area, Arizona (AR); and Upper Buffalo Wilderness Area, AR

Appendix 1 of Indiana's Regional Haze SIP contains a list of these Class I areas for all the Midwest states, and the analyses performed to assess the impact from Indiana sources compiled by the MRPO. Class I areas outside the areas listed above were not analyzed further, as there were no significant impacts from Indiana sources shown. Further, no impacts were noted in the WRAP states.

B. Determination of Baseline, Current, and Natural Conditions

The RHR requires Class I states to estimate the baseline, natural and current visibility conditions of those Class I areas. See 40 CFR 51.308(d)(2). There are no Class I areas within the State of Indiana. Therefore, this element does not apply to Indiana.

C. RPGs

Class I states must set RPGs that achieve reasonable progress toward achieving natural visibility conditions. Indiana does not have any Class I areas, so it does not need to set any RPGs. 40 CFR 51.308(d)(1). The states with Class I areas took the lead in establishing RPGs. Indiana consulted

with Class I states by participating in the discussions (meetings and conference calls) with MRPO and RPOs outside the Midwest to ensure it achieves its share of emission reductions as those Class I states determine RPGs. In Appendix 9c, of Indiana's Regional Haze SIP, the Lake Michigan Air Directors Consortium (LADCO) document "Reasonable Progress for Class I Areas in the Northern Midwest – Factor Analysis" (July 18, 2007), addresses factor analysis to establish RPG toward achieving natural visibility conditions in mandatory Class I areas. In addition, Appendix 9b of LADCO'S Technical Support Document "Regional Air Quality Analyses for Ozone, PM2.5, and Regional Haze: Final Technical Support Document," provides additional information related to Indiana's emissions and visibility contributions and a detailed discussion of the measures needed to achieve Indiana's share of emission reductions. Indiana has satisfied this requirement.

D. BART

Indiana began the BART rulemaking process in August 2006. Following its rulemaking, which included the notices of hearings and comments, Indiana adopted 326 Indiana Administrative Code (IAC), Article 26, Rule 1, Best Available Retrofit Technology, on October 3, 2007; it became effective February 22, 2008.

Indiana conducted a BART analysis using the criteria in the

BART Guidance. Using available source emissions and construction date information, Indiana developed a list of 32 BART-eligible sources within the BART source categories by county.

Indiana then applied the results of the screening modeling conducted by the MRPO to determine which BART-eligible sources have significant impacts on any Class I area and thus warrant being subject to BART requirements. In accordance with EPA's recommendation Indiana defined "significant impact" as an impact of at least 0.5 deciviews. By this means, Indiana identified the following non-EGUs as subject to BART: Alcoa Inc., ESSROC Cement Corporation, SABIC Innovative Plastics (formerly GE Plastics), and Mittal Steel USA Inc.-Burns Harbor. Indiana did not consider EGUs in its analysis as it decided to rely on these sources' participation in the CAIR to address the BART requirements for SO_2 and NO_X emissions from these sources, and a modeling analysis demonstrated that particulate matter impacts from EGUs at Class I areas were insignificant and did not warrant further control.

Indiana further analyzed the four non-EGU facilities to determine which sources are subject to BART. Additional more refined modeling analyses submitted for three of the four non-

EGU sources (ESSROC Cement Corporation, SABIC Innovative Plastics, and Mittal Steel USA Inc. - Burns Harbor) showed that they did not contribute significantly to the visibility impairment at any Class I areas, so that these sources may be exempted from the BART requirement under the regional haze rule. Modeling of these facilities indicated that just one source, Alcoa of Warrick County, is subject to BART.

Alcoa, Inc. - BART Determination and Modeling Analysis

Indiana submitted a BART analysis, prepared by Alcoa, which analyzed BART and alternative BART control strategies. Before beginning the five factor case-by-case BART analysis, Alcoa performed a baseline visibility impact analysis for each of the years 2001 – 2003 using the CALPUFF model with emission rates based on the 24-hour average actual emissions from the highest emitting day. The initial screening model projected the highest visibility impact at Mammoth Cave National Park (MCNP). Other Class I areas screened included Mingo Wilderness Area, Sipsey Wilderness Area, Great Smoky Mountains National Park, Joyce Kilmer – Slick Rock Wilderness Area, Cohutta Wilderness Area, and Shining Rock Wilderness Area. The impact at MCNP exceeded 0.5 dv. Since the visibility impact was highest at MCNP, the BART analysis focused on the impact at MCNP.

Alcoa identified 18 ingot furnaces, three boilers (Boilers

#2, #3, and 4), and five aluminum refining furnaces (Potlines 2-6) as meeting BART eligibility criteria. Boilers #2 and #3 are classified as industrial boilers. Boiler #4 is classified as an EGU, and, under Indiana's plan, is addressed by CAIR for SO_2 and NO_X in conjunction with other EGUs in the state. Thus, the BART analysis for boiler #4 will only address PM emissions.

After proposing determinations of BART for its BART-subject units, Alcoa proposed an alternative strategy which compensates for less stringent limits at selected BART-subject units by imposing more restrictive limits at a non-BART-subject unit at the facility. In most respects, Indiana's SIP submittal reflects the BART determinations and the alternative strategy that Alcoa proposed. Tables 1 and 2 show summaries of the BART determinations and the alternative BART control strategy that Alcoa proposed.

Table 1: Alcoa's Proposed BART Control Strategy

Emission Unit	**BART**	**Alternative BART**
Boiler 1	Not a BART-subject unit	
PM		Electrostatic Precipitator (ESP)
SO_2		wet Flue Gas Desulfurization (FGD) with 91% emission reduction efficiency
NO_X		Low NO_X Burners (LNB) with staged over-fire air (OFA)
Boilers 2 and 3		
PM	ESP	ESP

SO_2	wet FGD with 92% emission reduction efficiency	wet FGD with 90% emission reduction efficiency
NO_X	LNB with staged OFA	LNB with staged over-fire air OFA
Boiler 4 - PM	ESP	ESP
Potlines (2-6)		
--Fugitive emissions		
PM	no add-on control	no add-on control
--**Primary emissions**		
PM	gas treatment system followed by fabric filter	gas treatment system followed by fabric filter
SO_2	limit anode grade coke to 3% sulfur	limit anode grade coke to 3.5% sulfur
NO_X	no add-on control	no add-on control
	no add-on control	no add-on control

Table 2: Alcoa's Proposed BART Emission Limits

Emission Unit	**Emission Limit**	**Compliance Demonstration Method**
Boiler 1	Not a Bart-eligible unit	
PM (filterable)	0.03 lb/MMBtu, 24-hour daily average	Continuous emission monitoring system (CEMS) at the scrubber outlet according to 40 CFR Part 60, following Appendix B, PS-11
SO_2	91% reduction, 24-hour daily average	CEMS at the scrubber inlet and outlet according to 40 CFR Part 60, following Appendix B, PS-2

NO_X	0.38 lb/MMBtu, 24-hour daily average	CEMS at the scrubber outlet following PS-2
Boilers 2 and 3		
PM (filterable)	0.03 lb/MMBtu, 24-hour daily average	CEMS at the scrubber outlet according to 40 CFR Part 60, following Appendix B, PS-11
SO_2	90% reduction, 24-hour daily average	CEMS at the scrubber inlet and outlet according to 40 CFR Part 60, following Appendix B, PS-2
NO_X	0.38 lb/MMBtu, 24-hour daily average	CEMS at the scrubber outlet following PS-2
Boiler 4		
PM (filterable and sulfuric acid)	0.1 lb/MMBtu	40 CFR Part 60, Appendix A, Method 5
Potlines (2-6)		
PM (filterable)	0.005 grains/scf, 24-hour daily average	40 CFR Part 60, Appendix A, Method 5
SO_2	The sulfur content in each monthly baked anode composite shall not exceed 2.919%, provided however that hourly SO_2 emissions from the potlines shall not exceed 1,456 lbs/hr on a combined basis, and determined on a monthly basis.	ASTM D3177-02, modified by adding saturated bromine water before the pH adjustment. Alternatively, determination of sulfur content by x-ray fluorescence.

As shown in Tables 1 and 2, Alcoa recommended that it be subject to an alternative set of control requirements in lieu of being required to implement BART at each BART-subject unit.

This alternative would provide additional control of emissions from boiler #1 beyond that required in the baseline years, sufficient to compensate for allowing more SO_2 emissions from the potlines and from boilers #2 and #3. Thus, Indiana determined SO_2 BART (utilizing wet limestone flue gas desulfurization) for Boilers #2 and #3 as 92 percent reduction, but it adopted requirements to control SO_2 emissions from these boilers by 90% as an alternative. According to the discussion in Chapter 8, and Appendix 5, of the State of Indiana Regional Haze SIP, Indiana determined that BART for the potlines consists of the use of anode grade coke containing 3 percent sulfur, which is higher than the current Indiana rule that limits sulfur in the coke to no more than 2 percent. The alternative strategy recommended by Alcoa allows the use of coke containing 3.5 percent sulfur. To compensate for these less stringent limits, Alcoa's alternative strategy requires that the source control SO_2 emissions from Boiler #1 by 91 percent and control NO_X emissions to meet limit of 0.38 pounds/Million British thermal units (lbs/MMBtu) for boilers #1, i.e., the same limit as applies to boilers #2 and #3 (utilizing low NO_X burners and over-fire air). For particulate emissions, Indiana determined that BART represents use of electrostatic precipitators with an emission limit equal to 0.03 lbs/MMBtu for boilers #2 and #3. Indiana

determined that the particulate emission limit representing BART for boiler #4 is 0.015 lbs/MMBtu, with an alternative limit for this boiler as 0.10 lbs/MMBtu.

Indiana's submittal nominally follows Alcoa's recommendation. Nevertheless, Indiana's submittal does not change the SO_2 emission limits that apply to Alcoa's potlines. Therefore, EPA views Indiana's submittal as mandating a BART strategy for Alcoa that in fact includes status quo limits of potline SO_2 emissions.

In any case, EPA does not agree that an increase in sulfur content of coke used in the potlines at Alcoa's Warrick County facility, as opposed to a decrease in the sulfur content and thus in the emissions from these units, represents BART at these units. Furthermore, neither the company nor the state has provided evidence that this relaxation of limits on SO_2 emissions from these units does not interfere with attainment and maintenance of applicable SO_2 air quality standards, in contravention of Clean Air Act section 110(l). On the other hand, Indiana's submittal contains no rule revisions or permit provisions that would in fact implement any relaxation of limits on the SO_2 emissions from these units. Therefore, notwithstanding the discussion suggesting that Indiana supports an increase in these limits, the actual plan reflects

continuation of the existing limits without relaxation. That is, EPA considers Indiana's regional haze plan to reflect the current SO_2 emission limits for the potlines, not the relaxed limits discussed in Indiana's submittal. For each potline #2-6 the $S0_2$ emission limit is 195.2 pounds/hour at the stack, and 21.7 pounds/hour for each roof monitor associated with the potline.

Viewing Indiana's plan in that manner, EPA is satisfied with Indiana's alternative strategy for Alcoa. Modeling conducted by Indiana shows that the alternative achieves greater visibility improvement than BART, equal to 75 percent more reduction in deciviews over the baseline. The alternative BART, though it achieves greater reductions in all pollutants (PM, SO_2, and NO_X); and most notably achieves significantly higher reductions in SO_2 emissions, equal to approximately 21,600 tons more than BART. The resulting emission limits are adopted by Indiana into the Indiana's regional haze SIP submittal, and will be included in the facilities' Part 70 permit for each unit subject to BART.

Under the CAA, BART is required for any BART-eligible source that emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any Class I area. Accordingly, for stationary

sources meeting these criteria, states must address the BART requirement when they develop their Regional Haze SIPs. On November 3, 2010, the Indiana Air Pollution Control Board adopted as final Indiana BART Rule, 326 IAC 26-2, to establish BART emission limitations in order to comply with the RHR. Indiana's Regional Haze SIP includes a copy of rule 326 IAC Article 26-2 in Appendix 7.

E. LTS

As described in III. E of this action, the LTS is a compilation of state-specific control measures relied on by the state for achieving its RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas affected by Indiana emissions.

Indiana consulted with Class I states on the development of RPGs through its participation in MRPO. MRPO facilitated consultations with other Midwest states and with states in other regions through inter-RPO processes. By coordinating with the MRPO and other RPOs, Indiana has worked to ensure that its LTS provides sufficient emission reductions to mitigate impacts of sources from Indiana on affected Class I areas. Indiana believes that existing control programs will adequately address Indiana's impact on Class I areas. Thus, continued

implementation of the control programs will satisfy the long-term strategy requirements.

MPRO considered existing on-highway mobile source, off-highway mobile source, area source, power plant, and other point source programs as the existing control programs in its analysis. Indiana included a technical support document (TSD) produced by MRPO in its submission that details the analysis. Overall, emissions from Indiana and the Midwest, as a whole, are reduced significantly over this time, illustrating that Indiana is making appropriate progress toward reducing emissions.

At 40 CFR 51.308(d)(3)(v), the RHR identifies seven factors that each state must consider in developing its LTS. The state must consider: (1) Emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) Measures to mitigate impact from construction activities; (3) Emissions limitations and schedules for compliance to achieve the RPG; (4) Source retirement and replacement schedules; (5) Smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes; (6) Enforceability of emissions limitations and control measures; and (7) The anticipated net effect on visibility due to projected changes in

point, area, and mobile source emissions over the period addressed by the LTS.

Indiana relied on MPRO's modeling and analysis along with its emission information in developing a LTS. Indiana consulted with Class I states through its participation in MRPO. MRPO facilitated consultations with other Midwest states and with states in other regions through inter-RPO processes. Indiana considered the factors set out in 40 CFR 51.308(d)(3)(v) in developing its LTS. Based on these factors and the MRPO's technical analysis, in conjunction with RPGs that were set by the pertinent states in consultation with Indiana and other states, Indiana concludes that existing control programs adequately address Indiana's impact on Class I areas and suffice to meet their RPGs by 2018 by implementing the control programs already in place. These existing control programs include federal motor vehicle emission control program, reformulated gasoline, emission limits for area sources of VOCs, Title IV, the NO_x SIP Call, new source review permitting program, Maximum Achievable Control Technology standards, and federal non-road standards for construction equipment and vehicles. Furthermore, Indiana has open burning rules and its Department of Natural Resources has the authority to ban outdoor burning if necessary. Indiana noted in its submission that the state has a smoke

management plan that complements its open burning rules, under Indiana Code 13-17-9 and rule 326 IAC Article 4-1. Significantly, Indiana's LTS also relies on CAIR. In rulemaking published on December 30, 2011, at 76 FR 82219, EPA proposed to disapprove the BART plans and LTS's for Indiana and several other states because CAIR cannot be considered to provide permanently enforceable emission reductions.

As noted in EPA's separate notice proposing revisions to the RHR (76 FR 82219, December 30, 2011), a number of states, including Indiana, fully consistent with EPA's regulations at the time, relied on the trading programs of CAIR to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals. In that notice, we proposed a limited disapproval of Indiana's long-term strategy based on its reliance on CAIR. Comments on that proposed determination may be directed to Docket ID No. EPA-HQ-OAR-2011-0729. We are proposing to find that the remaining elements of Indiana's long-term strategy meet the requirements of the RHR.

F. Comments

Indiana took comments on its proposed regional haze plan. It held a public hearing on January 11, 2011, which concluded the public comment period. As part of the consultation process,

Indiana also received comments from the FLMs which were presented at Indiana's public hearing.

Indiana provided the comments it received and its responses with its plan. Indiana revised portions of its plan in response to comments received. EPA considers that Indiana has satisfied this requirement.

IV. What Action is EPA Taking?

EPA is proposing a limited approval of revisions to the Indiana SIP submitted by IDEM on January 11, 2011, and March 10, 2011, addressing regional haze for the first implementation period. The revisions seek to address CAA and regional haze rule requirements for states to remedy any existing anthropogenic and prevent future impairment of visibility at Class I areas.

Indiana's plan satisfies a number of elements of the regional haze requirements. Indiana's plan identifies the Class I areas that the state's emissions affect. Indiana demonstrates that the state has consulted with other states as appropriate in establishing reasonable progress goals and identifying the reductions need in Indiana to meet those goals. Indiana's plan meets the requirement for BART for non-EGUs and for particulate matter emissions from EGUs. For these reasons, and for the SIP

strengthening effect of Indiana's plan, EPA is proposing limited approval of Indiana's plan.

In addition to the above actions, EPA is proposing to approve regulation 326 IAC Article 26, Rule 2 into Indiana's SIP which incorporates BART emission limitations in order for sources to comply with EPA's Regional Haze Rule.

It should be noted that rule 326 IAC Article 26-2 contains an erroneous citation, citing limits in 326 IAC 7-4-10(a)(4) rather than 326 IAC 7-4-10(a)(3). EPA nevertheless finds the rule approvable for several reasons: (1) the pertinent limits are already an approved part of Indiana's SIP and are therefore already enforceable; (2) the State's intent is clear; and (3) Indiana intends to correct this referencing.

In a separate action, EPA has previously proposed a limited disapproval of the Indiana regional haze SIP because of deficiencies in the state's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). 76 FR 82219, December 30, 2011. Consequently, we are not taking action in this notice to address the state's reliance on CAIR to meet certain regional haze requirements.

VI. Statutory and Executive Order Reviews.

Under the CAA, the Administrator is required to approve a SIP

submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, and Volatile organic compounds.

Dated: January 17, 2012.

Susan Hedman,
Regional Administrator, Region 5.

[FR Doc. 2012-1604 Filed 01/25/2012 at 8:45 am; Publication Date: 01/26/2012]